

Why in the World is Carmen Sandiego a Success?

In the beginning, computers were not much more than giant calculators. Corporations used them for complex calculations and eventually databases and spreadsheets. The machines also began to take on automated tasks and could handle them well. The giant mainframes were what were used, and companies like IBM bet their business strategy that this atmosphere of the computer industry would continue as such. Then, microchips started appearing, and, with them, those big old computers started to come in smaller sizes. Then, these little computers were showing up in people's homes. It was when this started to happen that the magic of computers left the exclusive basements of office building and entered home users' dens and living rooms. With that, a new market of possibilities opened up as these consumers sought software for their new home computers.

One of the new areas that began to emerge from this shift was in educational software for children. Such software could provide parents and teachers a way to trick their children into learning something by hiding it behind an entertaining mask. This combination of education and entertainment formed the field of 'edutainment' software, and adults could not be more excited. After all, they saw how engrossed children became while playing computer and arcade games; if this level of concentration could be harnessed to teach the child something, imagine the possibilities!

Unfortunately, the edutainment field fell rather flat. The reason for this lies in a fact that many people recognize yet seem to forget all too quickly: kids are much savvier

than adults think. Designing a successful edutainment title would take more work than simply throwing some arithmetic equations and pixilated characters into a pot, stirring them up, and serving the result. Kids do not like vegetables, they do not like lame school lessons, and they can tell when adults are trying to make them consume one or the other. As one former educator put it, “They know that Football Spelling has nothing to do with football and everything to do with spelling. And by and large they don’t want that much to do with it.” With kids now on the lookout for these futile attempts at educational ‘fun,’ could there really be an edutainment title that was actually entertaining? Enter Carmen Sandiego and her mysterious whereabouts. To this day, the Carmen Sandiego series of games remains one of the oldest, best known, and most loved computer games in the history of computer software, let alone the edutainment category. But what makes them different from the thousands of other edutainment games, and why do kids love them so much? How did “Where in the World is Carmen Sandiego?” capture its audience’s attention and keep it over all these years? This paper will examine the factors contributing to the success of this lady in red, whose whereabouts, even after all these years, remain more elusive than a Sony Playstation 2 on Christmas Eve 2000.

Let us begin by examining how computers began to enter the lives of children. Led by the education friendly Apple II, computers began to become as common at schools as pencil cases and dodge ball. Students used them for a multitude of applications, from typing up a report to drawing in a paint program to using educational software to practice times tables. While each of these activities ended with worthwhile results, children partaking in them also received further, less tangible benefits. As Brian Sutton-Smith pointed out, the most valuable asset to come out of such computer

interactions is the development of a motive to ‘play about’ with a computer. Thus, children who are exposed to these simple computer applications would be more likely to feel comfortable around a computer and explore it more deeply in the future. Such a benefit would certainly encourage children’s computer use, as it would provide children with a comfort level and aptitude that even their parents may lack. Exposure to computers was not solely limited to classroom endeavors however. Access to home computer and video games was becoming more and more widespread as the games fed both adult’s and children’s desires for fun new ways to be entertained. One company that had entered the fray was Broderbund Software.

Broderbund was started in 1980 by two brothers, Doug and Gary Carlston, who named the company after the German (not Swedish, contrary to popular belief) word for “brotherhood.” Doug, a practicing Harvard graduate lawyer, started on the strength of a series of strategy computer games titled “Galatic Saga.” The company’s success and potential eventually drew Doug away from law and exclusively towards game development. Their early success continued with games such as “Alien Rain,” “David’s Midnight Magic,” and the classic “Choplifter.” By 1983, the company had grown from five to sixty people, and Broderbund was looking to expand its product line. Their three directions of development focused on home utility programs for the family, a line of computer literacy programs, and a third direction they called ‘edutainment.’ In this same year, while pursuing a home market that many experts claimed did not exist, Broderbund would conceive of the idea for Carmen, the idea that would catapult Broderbund and Carmen Sandiego into the homes of millions.

However, before there was Carmen, the queen of geography education, there was a game titled “Six Crowns of Henry VIII.” Your mission was to find the king’s crowns, which had been stolen and hidden throughout the English countryside... just a simple game with no educational goal. Somehow, this idea eventually morphed into the Carmen Sandiego pattern we know and love. The open-ended ‘somehow’ is used because even the original designers did not put much effort in trying to keep track of idea development. Lauren Elliott, who, teamed with the late Gene Portwood, designed Carmen and her hijinks from the beginning, had this to say about the design process: “A lot of what we did just happened. We didn’t think much about it.”

In fact, interviews with the Carlston brothers reveal that, in the early days of their game programming, games were not born out of topic ideas, but rather out of a clever piece of code someone had come up with. Thus, for example, someone would come to them with a routine that gave the effect of sliding over ice. Using this as a base, an animator would design some characters while a script writer would throw together a story line, and the editors would add a theme, throw it all together, and out came a game. However, despite this early process and the previous claim that “it just happened,” the topic of the Carmen Sandiego series did have some prior thought put into it.

Several sources weigh in on the origin of the concept of the game. Janese Swanson, a producer of the games, recalls her experiences as a flight attendant and her book of postcards collected from around the world. Using them, she would make up games based on geography that would keep her young passengers entertained for hours. Further adding their ideas to the pot were the cofounders, the Carlston brothers, who were inspired by the impromptu geographical trivia games they had played while growing up

in Iowa. They knew they wanted a game that would use a reference book companion, and they wanted a female heroine with a name that was unique but easy to remember. Dane Bigham, a programmer on the early games, came up with the Carmen concept, Cricket Bird wrote the original script, and Elliott, the clue writer, and Portwood, the Disney trained illustrator, took over from there and out came “Where in the World is Carmen Sandiego?”

Thus, in contrast to the bottom-up, “let’s see what we can do with this” attitude of Broderbund’s early game design, Carmen Sandiego was built top-down and had a distinct topic and goal, as defined by Chris Crawford. The topic of the game was the storyline of catching thieves and retrieving lost treasures, but the goal was to learn about geography and other facts about different locations in the world. Had Broderbund focused on the topic more than the goal, the result would have been an entertaining but easily forgotten detective game simply focused on chasing criminals. Luckily for them and us, they knew the goal was ultimately the key part of the game and remained focused on it as such, just as Crawford advises. The strong underlying goal taught kids about geography while the topic employed a non-linear storyline, impressive sound and graphics, and a sense of humor to hold their attentions.

One year after the successful 1985 release of “Where in the World...” came the follow-up “Where in the U.S.A is Carmen Sandiego?” The release of this game, along with subsequent others such as “Where in Europe...,” “Where in Time...,” etc., retained and built the strength of the character’s popularity while fortifying the “Carmen Sandiego” name in the increasingly overwhelming edutainment market. Examining these follow-ups provides more than just a study in brand management, however. From one

game to the next, the destinations would change, the graphics and sound would improve, and the reference material would end up on the CD instead of in an almanac, but the goal, the fundamental topic, and even the basic interface would all remain the same.

Broderbund found what worked in the original game, and they successfully stuck with it. Snazzy video, crisper pictures, and clear sound clips have made the game more attuned to today's kids' desire for multimedia, but what proves the strength of Carmen Sandiego is that the games were just as gripping without the bells and whistles. So, how have the original design concepts been able to survive so successfully for this long? What design factors have made this game a lasting classic, and how could others try to do the same?

First, it is obvious that Carmen Sandiego is no "Football Spelling." It is not piece of crudely disguised drill software that parents must bribe their children into playing. As mentioned earlier, many early pieces of edutainment software were really all education and no entertainment. Until the two could be successfully combined, children were often as excited to 'play' one of these games as to play with flash cards. Nothing new was added to the mix to make them attractive. Looking beyond this straightforward explanation, one might still wonder why Carmen Sandiego has performed so well even compared to other edutainment games that have successfully gotten away from the 'drill' atmosphere. Here, we can look at some of more detailed design choices made in designing the games.

Taking a page from Janese Swanson's focus on making technology that girls would use, I examined the series with an eye towards looking for such aspects. On the surface, one can immediately see the visual attempts to make the game appeal to both boys and girls. The 'heroine' Carmen Sandiego is a strong woman character that can

draw girls to the game while still being not so ‘girly’ as to scare boys away. The design decision to portray both male and female witnesses is one such basic decision in designing the game for gender neutrality. Furthermore, the user’s detective character is not given a name or gender in the game or instruction book. All references to the user are made by using the name inputted by the user. It is just another simple design decision but one that is vitally important to the game’s broad appeal. Giving the user’s character a gender one way or the other would immediately limit the user base to the chosen gender. By making sure not to do so and by further limiting the amount of unnecessary characterization, both boys and girls can easily imagine themselves as immersing themselves in the story as the rookie detective. Thus, when one girl was asked if she had a favorite character, her response was no surprise: “Yeah, me.”

The cross-gender success has a basis in more than just character identification. The game designers demonstrated a remarkable ability to straddle the game-playing preferences of boys and girls. As discussed in Swanson’s article on the differences between boys’ and girls’ game playing, boys prefer to play games that challenge them mentally and provide a distinct goal, whereas girls prefer games that offer more social aspects, such as talking with other people. The game play of Carmen reflects a wonderful compromise. The game provides a goal of catching the thieves and returning the treasures, and the means to that end requires players to decipher a puzzle of clues, which are obtained by talking with witnesses. Interestingly, it is precisely this magical combination of game interactions – talking to others and solving puzzles to reach the goal state – that seems to be key to the game’s broad appeal. Further evidence for this theory can be seen by examining the other timeless classic of edutainment: the “Oregon Trail”

series. There, the player converses with fellow settlers, who can provide tips for survival (the 'puzzle' to solve) as the player travels from location to location (sound familiar?) to reach the final goal of Oregon. It seems more than coincidence that both these classics, which have been great successes with both genders, would rely on such a model of interaction.

Finally, we can look to the Malone studies examined by Loftus to see what children really want when playing a game. Carmen Sandiego games contain four of the five features children find most important in a game being enjoyable: a specific goal, scorekeeping (in the form of getting detective promotions), audio and visual effects, and randomness (each mission was a different one). However, as noted in the study, while these are the things children say they find most important, it is hard to make strong conclusions from this data, so the presence of these factors may not explain Carmen's appeal. However, after further experimentation, Malone determined the three major ingredients in the game experience that make such vehicles ideal for learning: challenge, fantasy, and curiosity. The design of Carmen Sandiego appeals to each of these aspects. The challenge, which provides an intrinsic motivation for the child to continue playing, comes from the random mission each time the game is played and is sustained by the goal of staying on the thief's trail until finally catching her. The child's fantasies are played out by imagining herself as a world-traveling detective, hot on the trail of a wily crook. The lack of main character characterization (as discussed above) allows this fantasy to proceed unimpeded. Finally, the child's curiosity is piqued by providing a complex but decipherable environment. Complex and detailed clues, probably overwhelming by themselves, are tamed with the child's trusty almanac. This approach offers multiple

benefits. If the clues were so easy that the child already knew them all, the child would not only learn nothing but would also be bored to death in the process. Difficult clues pique the child's curiosity while the almanac provides the perfect means for the child to feel pride in deciphering the hints, while learning about reference books and world facts to boot.

Looking back on the causes of Carmen Sandiego's success, one can almost immediately toss out technological factors, seeing as the snazziest version available today requires only a 486/66 with 8 MB of RAM and a 2X CD-ROM drive and the original, just-as-fun version of the game contained no technical wizardry. Business factors may have influenced game design by encouraging Broderbund to strive to differentiate itself from the mounds of poorly designed educational software by really thinking about what factors would make a great edutainment product that parents, teachers, and kids could enjoy. However, despite the fact that the series has sold more than six million titles since its conception, they never expected it to become the sensation it has. Ultimately, the key factor of success for the Carmen series has been cultural. The designers were able to appeal to all children, boys and girls, by developing an experience with something for everyone. Goals, conversations, intrigue, suspense, learning geography... it's all there. Furthermore, they did it without just shoving a geography lesson down kids' throats and without talking down to them either (says Elliott, "We don't use small words. Kids are short but not stupid"). By treating children as the intelligent little people they are, the designers had no need to hide from them the fact that they were playing and learning at the same time. Kids knew. The beauty of Carmen Sandiego is that they kept playing anyway.